



2010-10

# Report of the WASC Visiting Team Education Effectiveness Review to Naval Postgraduate School Monterey, California, October 26 - 28, 2010 In Partial Fulfillment of the Requirements



Calhoun is a project of the Dudley Knox Library at NPS, furthering the precepts and goals of open government and government transparency. All information contained herein has been approved for release by the NPS Public Affairs Officer.

**Dudley Knox Library / Naval Postgraduate School  
411 Dyer Road / 1 University Circle  
Monterey, California USA 93943**

**REPORT OF THE WASC VISITING TEAM  
EDUCATIONAL EFFECTIVENESS REVIEW  
TO NAVAL POSTGRADUATE SCHOOL  
Monterey, California**

**October 26 – 28, 2010**

**In Partial Fulfillment of the Requirements for  
Reaffirmation of Accreditation**

**Team Roster**

**Mary Lyons, Team Chair  
President  
University of San Diego**

**Earl H. Potter, III  
President  
St. Cloud State University**

**Linda Buckley, Assistant Chair  
Associate Vice President  
Academic Planning and Development  
San Francisco State University**

**Sharon A. La Voy  
Director of Assessment  
University of Maryland**

**Keith Bell  
WASC Liaison**

**The evaluation team in conducting its review was able to evaluate the institution under the WASC Commission Standards and the Core Commitment for Institutional Capacity and therefore submits this Report to the Accrediting Commission for senior colleges and universities of the Western Association of Schools and Colleges for action and to the institution for consideration.**

## TABLE OF CONTENTS

SECTION I. OVERVIEW AND CONTEXT.....	3
A. Description of Institution and Visit.....	3
B. Quality of the EER Report and Alignment with the Proposal .....	4
C. CPR Review Update .....	6
 SECTION II. EVALUATION OF EDUCATIONAL EFFECTIVENESS UNDER THE STANDARDS .....	 7
 Theme 1: Strategic Planning for the Next Century .....	 7
Theme 2: Integrating a Campus-Wide Program of Improvement .....	13
Theme 3: Supporting an Evolving Academic Enterprise.....	23
 SECTION III. COMMENDATIONS AND RECOMMENDATIONS.....	 29
 Commendations .....	 30
Recommendations.....	33

## **SECTION I. – OVERVIEW AND CONTEXT**

### **A. Description of Institution and Visit**

The Naval Postgraduate School (NPS), considered the research university of the Navy, is an institution dedicated to providing relevant education and research to the defense and security arenas, recognizing and solving problems in support of U.S. military forces, global partners and national security. The institution has a long and distinguished history, and recently celebrated its centennial anniversary. While many civilian universities provide graduate education, few are dedicated to providing substantial national security related graduate educational programs for military officers, as well as federal, state and local government civilian employees and contractors. The Naval Postgraduate School is such a place.

At NPS, four graduate schools oversee 14 academic departments supporting more than 63 masters and 18 doctoral degree programs. In addition to 1,700 resident students, including more than 200 international students from 40 plus countries, NPS serves approximately 850 distributed learning students worldwide. Four institutes, multiple secure research facilities and 23 Centers of Excellence add to the wealth of intellectual resources. NPS delivers non-resident courses to students through online, web-enabled, video-tele-education (VTE) systems and/or by visiting faculty. Continuous learning, refresher and transitional educational opportunities abound. NPS also offers short-term, executive education courses and a variety of short courses in Monterey, throughout the U.S., and abroad.

Students in residence at NPS are typically officers in one of the armed forces of the United States or civilian employees of the Department of Defense. Additionally, a substantial

international student population includes military officers and defense civilians from U.S. allied nations. Civilian personnel from state and local government organizations are also educated through the distributed learning programs.

The NPS faculty is comprised of approximately 600 scholars and professionals, 6 percent of whom are military officers and half of whom are either tenured or tenure-track faculty. To strengthen expertise and program relevance, and to expedite research successes at NPS, a robust mix of tenured faculty, research faculty, lecturers and visiting professionals integrate teaching with research, demonstrating the immediate applicability of scholarly solutions to defense-related problems.

Approximately 400 staff members, directly employed by NPS, provide support for both the academic and administrative functions of the School. This workforce is supplemented by contractors and other Department of Defense employees. Staff provides a wealth of functions ranging from office, budget and purchasing to laboratory assistance to maintenance to counseling, registration and student services.

The Board of Advisors to the President, Naval Postgraduate School Sub-Committee, an 18-member federal advisory committee, provides guidance and reports to the Secretary of the Navy, the Chief of Naval Operations, and the Commandant of the Marine Corps on matters pertaining to NPS and its graduate educational and research programs.

## **B. Quality of the EER Report and Alignment with the Proposal**

In the June 26, 2009 WASC Commission letter to NPS regarding the CPR visit, the Commission noted that the institution had developed a strong mix of programs, engaged faculty

in leading-edge research and effective instruction, initiated online programs to serve the needs of the Navy and its sponsors, and developed an accountability system to assure that it is meeting the needs of its students and their sponsors. The CPR team found that NPS had accomplished a substantial number of goals for the CPR, but noted several areas to be included in the EER report, notably 1) Strategic planning for the next century, 2) Integrating a campus-wide program of continuous improvement, and 3) Supporting an evolving academic enterprise.

The EER visit took place October 26 – 28, 2010. The EER team found that in the 18 months since the CPR visit, NPS has worked conscientiously and energetically to address each of the recommendations of the Commission, and in many areas has made great progress in a short period of time. During the visit, the university community from the Board of Advisors to the President, Provost, deans, faculty, staff and students with whom the team interacted were welcoming and accommodating of the needs of the visiting team. The campus community was well-informed of the presence of the team and the purpose of the visit, and there was widespread interest in it. Members of the team met formally and informally with many different groups and individuals, most of whom are identified below. Documents supporting the EER report were provided to the team electronically before the visit, and many more were available to the team during the visit. In addition, the School provided detailed information packets (“briefs”) for every scheduled meeting during the visit.

### **C. CPR Review Update**

#### **Responses to Issues Raised in the Capacity and Preparatory Review**

The Naval Postgraduate School hosted its last WASC accreditation visit in February 1999. The WASC Commission subsequently reaffirmed the accreditation of the Naval Postgraduate School (NPS) and asked NPS to consider a number of important recommendations. In 2004, WASC also approved a system sub-change proposal, allowing the School to continue to mount a number

of online degree programs, consistent with its mission. In 2007, WASC approved a sub-change proposal for an off-campus program in Systems Engineering. In March 2009, NPS underwent the Capacity and Preparatory Review, which was subsequently approved by the Commission, with the following Action Letter findings: “In particular, as the School looks ahead to the Educational Effectiveness Review (EER), it should build on the foundation already in place for assessing learning outcomes. Even though the School needs to meet the specific needs of its sponsors, it can also work to develop the distinctive characteristics of an NPS education, assess the achievement of these outcomes, and incorporate assessment results into its program review and planning efforts.”

NPS has shown an exemplary level of commitment to the continuous improvement of educational effectiveness. The leadership of the institution embraced the suggestions from the recent CPR report, and the effects of those changes are already evident. NPS has already identified areas for improvement realized since the submission of the EER. The leadership has embraced data-driven decision-making processes, incorporating surveys, focus groups, curriculum mapping and rubrics into many of their academic leadership discussions.

The identification of program learning outcomes and mapping to coursework is exemplary based on the specific needs of the faculty and sponsoring agencies, a model for others. The review of academic endeavors is rigorous and robust, incorporating both traditional academic program reviews that other academicians would recognize, with more frequent and specific curriculum reviews supporting and reacting to program sponsors. Faculty and staff state these reviews are complementary, the former investigating the academic health of the departments through faculty productivity and research, and the latter investigating the student experiences and learning and skills acquired. The use of direct measures of student learning is developed in the externally accredited departments, and is emerging in other programs, with the systems and resources in place to bring them along. Campus leaders show a commitment to spreading best practices across campus and tying selected resources to needs identified in assessment projects.

## **SECTION II – EVALUATION OF EDUCATIONAL EFFECTIVENESS UNDER THE STANDARDS**

### **Theme 1: Strategic Planning for the Next Century**

Materials Examined: Educational Effectiveness Review; Strategic Plan; Command Inspection Report 2009; Benchmarking Studies (Appendix 2); Academic Program Metrics; Departmental Briefing Materials.

Interviews: President, NPS; Provost; all Vice Presidents; all Deans; Educational Effectiveness Steering Group (EESG) members; University Librarian; selected faculty from across schools and programs

The March 2009 Capacity and Preparatory Review team report noted that NPS had launched an ambitious agenda with its Institutional Strategic Plan: *Vision for a New Century* (2008). This plan, developed with broad consultation among its many stakeholders, reflects a commitment to continuous improvement as it progresses toward its goal of becoming a world-class research university focused on national security.

The Educational Effectiveness Review (EER) details the initiatives intended to realize the objectives of the Strategic Plan, *Vision for a New Century* (2008). The on-going planning and benchmarking guided by the Educational Effectiveness Steering Group (EESG) yielded specific additions of personnel and programs to support the expanding mission of NPS. Thus, the EER focus intends to examine the progress toward goals specified in the CPR. Of particular interest is discerning the extent to which new benchmarking metrics, nascent expansion of academic programs, new approaches to resource planning, and greater attention to institutional



advancement have indeed brought NPS closer to achieving its own institutional purposes and objectives (Standard I). A review of the achievements and results of the four goals specified in the strategic plan provides evidence of NPS's highly developed culture of strategic thinking and evidence.

***Goal 1: NPS will sustain continuous improvement in the quality and relevance of our graduate education and research programs.***

In August 2009 the Naval Inspector General conducted a comprehensive review of NPS. As the principle sponsor and funder of NPS, the Navy has a proprietary interest in program quality and student achievement. Among the many dimensions included in this review was strategic planning. The report, issued in December of 2009, stated:

“NPS has a robust strategic planning process. This is, in our opinion, a model process. The NPS 2008 Strategic Plan, approved by the Board of Advisors in May 2007, contains a forward-looking approach to address the Chief of Naval Operations-directed mission requirement of NPS. Substantial effort has been invested in the development of metrics, which are reviewed on a regular basis by the Strategic Planning Council comprised of senior leadership across the institution. Moreover, each graduate school has developed a supporting strategic plan. Metrics have been developed, or are in the development process, which are traceable to NPS strategic goals. Further the strategic planning process is being pushed down into the departments, with supporting plans, goals and metrics completed, or in the development phase.” (Command Inspection of Naval Postgraduate School, 15DEC09)

Rarely in higher education does the “customer” or “end-user” examine and comment on institutional effectiveness. The report cited above captures what the EER visiting team discovered and verified. The WASC CPR Report recommended that NPS “develop a

measurement system with clear performance goals that are benchmarked against aspirational peers.” NPS developed such metrics, focusing on faculty productivity, graduation rates, and other areas. This and other analyses yielded activities that have enhanced support for faculty and, as a consequence, for their own research. [CFR 3.8, 3.11] Faculty, previously funded for two academic quarters (six months) were expected to generate their own support through research grants for the two remaining quarters. Just prior to the CPR, the faculty support was extended to three quarters (nine months), providing greater opportunities for teaching and research in support of the overall NPS mission. As one faculty member stated in the EER visit interviews: “This was a ‘watershed’ moment for us!” The hiring of a VP and Dean of Research in 2009 has also bolstered the institution’s “basic research” agenda and provided its expanding enrollment of Ph.D. students a richer array of opportunities for investigation. For this goal and others, the on-going deliberations of the Educational Effectiveness Steering Group (EESG) insure that these and many other initiatives develop within a corresponding culture of accountability. The EER examined metrics outlining the improvements in graduation rates, PhD enrollments, resident student satisfaction, and faculty research. The team discovered an institution with a rich and productive commitment to reflection and action, from the top down. The President’s commitment to “data driven” decision making has been complimented by a highly participative and persistent review of progress to goals, all evidence of NPS’ environment of continuous improvement. [CFR4.6]

***Goal 2: NPS will extend education to the Total Force and to our Global Partners***

The emerging educational and training needs associated with sustaining and enhancing national and international security present NPS with teaching and research opportunities reaching personnel from all military services, coalition allies and defense agencies, including

civilians and international military officers. These members of the “Total Force” have benefited most recently by the development of programs in response to this particular goal of NPS’s strategic plan. For example, Naval aviators, whose particular career requirements impede participation in a residency graduate program, now have the option of enrolling in an Executive MBA designed by NPS specifically to meet their needs, a Distributed Learning degree negotiated with the aviators’ Command to permit one full day a week of instruction through Video Conferencing (VTC). The result of this innovation is an exponential increase in the number of Naval aviators obtaining career enhancing master’s degrees. In fact, the emphasis on expanded Distributed Learning (DL) programs has been a boon to Total Force education. Some programs have experienced as high as a 49% increase. [CFR 4.4]

An interview with the flag officer who is the Vice Director for Command, Control, Communications, and Computers, Joint Chiefs of Staff applauded NPS for encouraging students to embark upon cross-disciplinary research leading to greater strategic thinking and for its efforts to interface with business and technology communities outside of the military. Furthermore, the growth in enrollment of international military officers has been cited as increasingly significant because, as graduates, these professionals often influence their own nation’s security strategy. While in a post-9/11 environment these enrollments declined, they are now recovering.

The nimbleness and readiness of NPS to respond through DL education to emerging needs is reflected in its development of the Center for Homeland Defense and Security, offering master’s degrees and executive education for its global partners, especially those serving in a variety of local, state, and federal Homeland Security positions. A curriculum combined with a rigorous evaluation and assessment structure insures that the most current and relevant courses are offered to its students. [CFR 4.6, 4.7]

### **Goal 3: *NPS will broaden research in National Security***

A hallmark of the NPS curriculum is the “real world” research conducted both by faculty and students. Testimony by the flag officer who serves as the Oceanographer and Navigator of the Navy, one of the Sponsoring agencies of NPS, praised the institution for preparing its graduates for their readiness to address both the “known and unknown;” that is, cultivating in its students abilities to apply rapidly their skills for addressing critical challenges. He also cited to team members the importance and value of both student and faculty research because of its immediate responsiveness to priorities of Naval Operations.

Several developments deriving from the strategic direction of NPS have had measurable results in achieving broadened research and program development in National Security. A most notable indicator of the seriousness with which NPS has advanced its research agenda has been the hiring of a VP and Dean of Research. While NPS has consistently engaged in basic research, a close examination of metrics associated with the loss of some key faculty members and subsequent deterioration of publications in the area of Materials Science prompted a proactive response from NPS administration. [CFR 1.2] The decision to proceed with a “cluster hire” of 3-4 junior faculty in Materials Science resulted in a measurable increase in research publications and breathed new life into these departments. [CFR 1.3,1.8]

Faculty representing a broad spectrum of academic disciplines agree that “maintaining a top-flight research program is important to keeping courses and curricula current with the latest developments in theory, application of theory, and technology in the various fields of study available at NPS.” (briefing materials “Research in Support of Education, 26OCT2101). Faculty mentor students who are eager to engage in research projects and thesis or dissertation research with “real world” applications. Sponsors are, in turn, similarly appreciative of these

contributions to the success of their missions. It is noteworthy to underscore the responsiveness of NPS to emerging “real world and real time” needs of the military. Most recently, the threat to cyber security has prompted NPS to compete successfully for funding to support its new Cyber Security program. Developing research agendas have created a corresponding need for expanded computing capacity. In response to this, the IT task force recommended the acquisition of a university supercomputer. In 2009, the High-Performance Computer was installed, thus advancing significantly support of the university’s research.

**Goal #4: *NPS will seek operational excellence in financial, business, administrative and support areas.*** - See Theme 3 (pg. 23)

See Theme 3 (pg. 23) for the discussion of Goal #4: *NPS will seek operational excellence in financial, business, administrative and support areas.*

## **Theme 2: Integrating a Campus-Wide Program of Improvement**

Materials Reviewed: Educational Effectiveness Review Report; Distance Learning self-study; promotional videos; Accreditation Board for Engineering and Technology (ABET) self-study and thesis and capstone evaluation forms for Systems Engineering program; secure campus intranet pages hosting an abundance of assessment forms and rubrics; briefs provided in every session; biographies of program sponsors; results of NPS graduating student surveys; student engagement reports; Review and Assessment Profiles (RAP Sheets) from Computer Science, Electrical and Computer Engineering, National Security Affairs, and Business and Public Policy.

Interviews: President and Provost; Educational Effectiveness Steering Group (including the Vice Provost for Academic Affairs); department chairs; faculty responsible for the capstone assessments; academic associates and program officers from recent curricular reviews; selected program sponsors (Rear Admirals); Director of the Center for Educational Design, Development, and Distribution; and faculty and chairs from distance learning programs; chairs and deans of programs recently under program review; Director of Faculty Development and selected faculty participants in PETAL; and the WASC planning group.

Theme 2 encompasses the efforts undertaken in the past two years to improve academic programs through initiatives in program review, curricular review outcomes-based assessment and distance learning.

NPS organizes academic review through two fundamental processes: Curriculum Review and Program Review. A curriculum is “a defined program of study leading to advanced knowledge and learning in a defined field,” the requirements of which are defined by a sponsor or community. Each curriculum offers NPS students the opportunity to participate in the development of applied, real-world projects, which are sponsored by either a military organization or an industrial company or corporation. A degree program is “a defined program of academic study leading to knowledge and learning focused within an academic discipline,” as defined by the faculty and the Academic Council. Degree programs include a variety of curricula. Students enrolled in different curricula can earn the same degree, and different levels of degrees can follow a particular curriculum. The Vice Provost for Academic Affairs provides oversight to both structures, aided by various academic and programmatic positions at the institution. Curriculum Review governs curricular programs of study, while Academic Program

Review aligns with academic departments. New Program Review governs the adoption of new academic degrees, curricula, or certificate programs. [CFR 2.3, 2.6]

In order to appreciate the unique academic structure of NPS, it is necessary to understand several personnel positions that exist. Program officers are active duty military officers assigned to NPS who function as intermediaries between the program and the curricular sponsors. These officers consult with sponsors to determine how the curriculum aligns with the needs of the field. The program officers also work one-on-one with students to help them progress through their programs. If students have deficiencies or problems, the program officer is responsible for helping them resolve these issues. While it may appear to the outside observer that NPS is lacking in student support services compared with civilian academic institutions, it is this unusual infrastructure that provides student support that is often housed in units of “student life.” [CFR 2.13]

Each curriculum at NPS is sponsored by a division flag officer in the Navy or other service. The WASC team learned that sponsors (often Rear Admirals) may be former NPS students themselves, and they provide on-going, real-time assessment of the curriculum. They may also propose specific projects, and review student work as evidence of the output of the curriculum. NPS is in a unique position to have such a continuous and strong link to the employers of their graduates, enabling them to modify the curricula to meet the changing needs of the field. The sponsors that the WASC team spoke with were particularly effusive in their admiration and appreciation for the work NPS does to educate their workforce. They reinforced the distinction, however, that the team had heard from faculty, that the sponsors do not tell NPS what to teach, or how to teach it. Instead, they identify areas of knowledge and understanding that graduates

need to have in order to be successful, and leave it up to NPS to implement the curricula. [CFR 2.10, 2.11, 2.12]

In addition to the program officer, each academic program also has an academic associate, who is an NPS faculty member charged with acting as a liaison between the curriculum program officer and the department faculty. The academic associate works with the chair and all faculty to implement the agreed-upon changes to the curriculum that are decided within the program reviews. The academic associate is more concerned with classroom learning and the evaluation of theses and comprehensive examinations both at the individual level and ideally at the program level. [CFR 2.6, 2.7]

Curricular Review occurs every two years, and seeks to confirm that each curriculum is fulfilling the needs of the defense community and insuring that graduates meet the defined Educational Skill Requirements (ESRs). The institution brings in stakeholders to confirm that ESRs are appropriate for the field, and the curriculum sponsor reviews the findings with program officers and other NPS staff and faculty. Program Review more closely reflects a traditional academic discipline review cycle, every six years in this case, performed by academic peers from aligned disciplines. These reviews focus on education, research, resources, productivity of the faculty, and overall improvement. Each program review culminates with a visit from external consultants – peer academicians, who issue a report that is reviewed by the deans, the Provost, and the Academic Review Council, the final body of review. [CFR 2.1, 2.2, 2.3, 2.4]

Faculty and staff who spoke with the WASC team noted that curricular review and program review have complementary functions. In the curricular review, faculty are often working with former students who have become sponsors. Because of their detailed understanding of both NPS programs and the products of the sponsored projects, sponsors provide an informed



perspective on the currency of the curriculum and also the learning of students with respect to their work on projects. They give real-time feedback to the programs with regards to the performance of the graduates. It is a robust, dynamic, rigorous and almost continuous look at the curriculum of each program. Consultants on program reviews, on the other hand, offer a more discipline-based perspective with regard to the curriculum, and they use a more holistic lens in evaluating programs and the health of the department from the faculty and research perspective. The combination of the curricular review and the program review provide the sort of multiple-level approach needed for the evaluation of dynamic, applied research. [CFR 2.4, 2.5, 2.6]

NPS reports expanding its direct assessment of student learning from the externally accredited programs to all programs, developed at the department level and appropriate to the field. Methods include thesis ratings, embedded in-class assessments, professional examinations, and employer reviews. Further, this year the campus has implemented the Capstone Initiative, which now requires all programs to implement an evaluation of the culminating experience such as a thesis or equivalent. As a part of this initiative, faculty have been asked to perform reviews in a systematic way and to incorporate their findings into departmental review. While much progress has been made during the WASC review, with program assessment and the Capstone Initiative now institutionalized, the WASC team observed that campus-wide use and understanding of learning outcomes is just emerging in many departments. [CFR 2.6, 2.7]

Overall direct assessment is in the developmental stage; however, indirect assessment is highly developed throughout the institution, and NPS has demonstrated a willingness to make institutional changes using indirect assessment results. For example, based on both faculty and student observations that the academic quarter system was compressed and did not allow for faculty development or student enrichment activities, the campus changed its academic

schedule. It shortened the quarter by a few days and proposed final exams on a weekend to allow for an “E-Week” or engagement week at the end of each quarter for creative and engaging activities for both faculty and students. This change allows for faculty development activities that otherwise would not occur during coursework, for out-of-the-box activities for students such as participating in war gaming exercises, and even for addressing student learning issues. Systems Engineering instituted a writing workshop during E-Week, and the business program has indicated they will follow suit. [CFR 2.13]

With regard to assessment, the Engineering and Business Departments have had specialized accreditation for many years and, therefore, have evidence of fully mature assessment cycles. These departments are well-positioned to leverage their knowledge and experience in program assessment throughout the campus. The programs that are not governed by external accreditation are not as far along with regard to assessing student learning at the program level. They too have a strong curriculum review based on sponsor expectations, which incorporates employer feedback, results from student and alumni surveys, and careful attention to essential skills, but not much direct assessment of student work. The WASC team notes that it is absolutely essential that support for and expectations of these efforts continue, and suggests that NPS leverage the best practices of the business and engineering programs to educate and guide the rest of the programs in this regard. [CFR 2.4]

The team further noted that one of the most meaningful supports for these efforts has been the Promoting Excellence in Teaching to Advance Learning (PETAL) program, which was developed in 2009. This professional development initiative focuses on cultivating awareness among faculty about principles of learning, effective course development, pedagogy, and the use of methods and technologies that strengthen connections between teaching, learning, and

assessment. Specific PETAL activities have included courses and customized workshops, faculty orientation, instructional coaching, consultations, special projects, and professional development planning. These efforts have targeted three groups: faculty new to NPS; tenure track and non-tenured faculty with less than five years of teaching experience; and faculty teaching in distance learning programs. The examples presented to the WASC team by faculty who had worked with the PETAL program were innovative and represent some of the best practices in discovery and problem-based learning. The director of the PETAL program has been a catalyst for promulgating and fostering a learner-centered culture at NPS. Her efforts have laid the foundation for a culture of learning at this institution, and the WASC team encourages the Vice Provost of Academic Affairs to continue support of this program. [CFR 3.3, 3.4, 4.7]

Leadership for educational effectiveness activities on campus is provided by the now-permanent Educational Effectiveness Steering Group (EESG), which grew out of two previous related committees. It is comprised of faculty and staff from academic and support units, and is chaired by the Vice Provost for Academic Affairs [CFR 4.6]. This group coordinates the Review and Assessment Program (RAP), which establishes a framework for assessment of programs, setting campus-wide expectations, and supporting further development in these areas [CFR 2.4]. In conversations with EESG, the WASC team learned that the group, though developed for the purposes of responding to WASC, has become institutionalized as an on-going effort for assuring educational effectiveness. EESG has developed a combination of incentives and expectations to promote the improvement of academic programs. The incentives include the analysis of student engagement measures related to student outcomes and a framework for common, standard measurement and reporting. For example, NPS has standardized a rubric for evaluation of

capstone projects, and provide summary analysis at the school and program level for faculty use. In addition, the NPS website includes a series of best practices that provide examples of model assessment work. At the faculty level, the PETAL program provides support to individual faculty members in developing course level assessment, and coaches faculty in understanding and implementing this assessment with those practices in place at the program level. Interviews with staff and testimonials from a faculty panel indicate that the PETAL program is creating momentum from the ground up [CFR 2.9, 3.4].

The EESG also indicated that NPS administration had generously supported the development of assessment and program review processes throughout the WASC process [CFR 2.7]. An EESG member meets with each academic department once yearly to discuss the annual assessment cycle (plans and results) in the department. The timing of those meetings is meant to allow for adjustments to the budget-building process. That is, do any results from various assessment activities indicate needs that should be addressed with resources? For example, an assessment process in Business confirmed the faculty's anecdotal observations that students need more help in improving their writing to successfully complete a thesis. The Business faculty are currently in the process of designing an enrichment module (a four-day course nestled between academic quarters) to address this need. It goes without saying, that it imperative for resource support for these efforts to continue. [CFR 4.2]

The Distance Learning Initiative has been a major focus of the EER, and integrates with the School's expanding use of course and program assessment [CFR 2.10]. Since NPS considers its population of potential clients to be the Total Force, including the Department of Defense civilian and contractor workforce, distance education becomes a critical tool in building capacity for the future growth of the institution. Distributed Learning enrollments have grown to be fully

a third of the degree enrollments at NPS. All of the programs have developed rigorous on-going assessment with both direct and indirect measures of student learning. One of the primary goals of the DL group has been to sustain continuous improvement in the quality and relevance of the programs, ensuring that the quality of these programs is equivalent to the quality of residential programs. [CFR 3.5, 3.6]

While the graduation rates of DL students are somewhat lower than the graduation rates of residential students, faculty believe that they are addressing this issue. In a self-study of DL, the faculty learned that completion of the thesis is the prevailing problem in the differential graduation rates. Departments are currently working to improve advising and to provide substantial follow-up when progress lags to increase graduation rates. At the same time, they acknowledge that students in the DL programs are fully employed and are isolated from other students for the most part. The WASC team agrees that achieving equivalency in graduation may prove challenging because of these factors.

With regard to delivery technology, in AY 2009, 38% of the sections taught used video conferencing, 19% used Elluminate, 19% were hybrid, 18% were asynchronous, and 6 % were taught offsite. In discussions with the program chairs who have mounted DL programs, the WASC team learned that maintaining up-to-date technology was not problematic because of sponsors' on-going interest and continuous support for the use of the latest available IT tools. In addition, all departments that participate in DL offer training for their faculty through their own instructional design teams, the Center for Educational Design, Development and Distribution, or the PETAL program. There is substantial resource support for DL. [CFR 3.6]

Going forward, NPS expects to continue establishing an infrastructure for DL governance by creating a DL Council. Because of the significant resources required to mount and maintain an

extensive DL program, the campus plans to examine mission-funding and reimbursable funding alternatives for DL. Similarly, the School will be consolidating support services, reducing duplication and thereby improving efficiency in these programs. The WASC team concludes that NPS is well-positioned to continue their expansion of the distributed learning delivery mode.

In summary, NPS has shown an exemplary level of commitment to the continuous improvement of educational effectiveness. The leadership of the institution embraced the suggestions from the recent CPR report, and the effects of those changes are already evident [CFR 1.3]. They have already identified areas for improvement realized since the submission of the EER report. The leadership has embraced data-driven decision-making processes, incorporating surveys, focus groups, curriculum mapping and rubrics into many of their academic leadership discussions [CFR 4.5, 4.6, 4.7].

The identification of program learning outcomes and mapping to coursework is exemplary based on the specific needs of the faculty and sponsoring agencies, a model for others. The review of academic endeavors is rigorous and robust, incorporating both traditional academic program reviews, with more frequent and specific curriculum reviews supporting and reacting to program sponsors [CFR 4.4, 4.8]. Faculty and staff state these reviews are complementary, the former investigating the academic health of the departments through faculty productivity and research, and the latter investigating the student experiences and learning and skills acquired. The use of direct measures of student learning is developed in the externally accredited departments, and emerging in other programs, with the systems and resources in place to bring them along. Campus leaders show a commitment to spreading best practices across campus and tying selected resources to needs identified in assessment projects [CFR 1.3].

### **Theme 3: Supporting an Evolving Academic Enterprise**

Materials Reviewed: Capacity and Preparatory Review; Educational Effectiveness Review Report; EER Appendices 2, 3, 4, 6, 70; Institutional Advancement External Review

Interviews: President, NPS; Chair WASC Planning Group; Executive Vice President & Provost; Vice Provost for Academic Affairs; Deans; Registrar; VP & Dean of Research; Associate Dean of Research & Faculty researchers; University Librarian; VP Administration & Finance; Comptroller; Director of Financial Systems; faculty on Working Group on Customer Satisfaction; Vice President for Information Resources & Chief Information Officer; IT Task Force Member; Executive Director of Institutional Planning and Communications; Institutional Advancement Council; Sponsors; Chair of Futures Committee.

In April 2008, the Naval Postgraduate School (NPS) completed a strategic plan “Vision for a New Century” that established four goals: 1) Continuous improvement in the quality and relevance of graduate education and research programs, 2) Extend education to the total force and NPS global partners, 3) Broaden research in national security, and 4) Seek operational excellence in financial, business, administrative and support areas. A commitment to a sustainable system to support the evolving academic enterprise is embodied in Goal 4 [CFR 4.1]. Success in goal areas I through III depends upon the capacity created in response to Goal 4. Goal 4 directly overlaps Theme 3 in the Educational Effectiveness Review.

In its 100-year history, NPS has evolved into a complex organization that includes a core campus in Monterey, California, distance learning students in locations around the globe, a student body that includes U.S. military and civilian personnel, as well as international students. A \$120 million research program is attuned to the needs of the Navy and its many partners. By

the beginning of the 21<sup>st</sup> Century systems that, even a decade before, were adequate to support high quality education, programs had become strained. While continuous systems development has always been a feature of NPS program delivery, the pace of change and the scale of challenges called for a transformational redesign of support systems to fit current and future needs [CFR 4.2].

A number of needed changes were identified in the March 2009 Capacity and Preparatory Review (CPR). Since the CPR visit, NPS has addressed each of the team's recommendations. NPS has overhauled financial processes, implemented a new budgeting process, reorganized its administrative structure, developed a new approach to facilities allocation, selected and implemented new data management systems, developed centralized high performance computing (HPC) capacity and implemented a new scheduling system [CFR 4.2]. Planning and decision making systems have been institutionalized and decision-making systems have become data driven, mission focused and coordinated across all units of the university [CFR 4.3]. New metrics have been implemented or are being developed and several functional areas have already been through at least one cycle of planning, implementation, assessment and program improvement [CFR 4.4, 4.5]. Evidence of sustainable change is available in many areas and in other areas planned changes are following paths that have led to success in earlier changes. All program investments are keyed to the NPS strategic plan and are assessed for results required by the plan. Evidence of substantive change is present and accessible. Results are used to inform planning for next steps. Processes that have been put in place appear to be sustainable, since they are anchored in strategic priorities and adequately resourced. Moreover, new processes and capacities deliver value to constituents, which clearly motivates parties to continue successful planning, decision making and allocation processes.



NPS has greatly improved its standing with the Department of the Navy as evidenced by its designation as a flagship educational institution on the same level as the Naval War College and the United States Naval Academy. With an operating budget of approximately \$330 million and a research budget of about \$120 million, there is visible evidence on campus of increased investment in maintenance and grounds upkeep [CFR 3.3]. While the larger Navy community experienced budget cuts of up to 20%, NPS funding actually increased and will remain stable over the next two years. While federal budgets for the next decade and consequent funding for the Navy and NPS are uncertain, the financial position of NPS seems secure for a number of reasons. First, the institution's planning approach, Vision for a New Century, has won broad support within the Navy, including citation as a model planning process by the Inspector General of the Navy. Second, greatly expanded interactions with sponsors within the Navy have resulted in strong support for the importance of NPS to their programs and to the future of the Navy. Third, plans to increase research funding and expand reimbursable education programs as well as securing a place in professional communities not previously engaged with NPS (e.g., via Distance Learning programs for the aviation community) not only increase available dollars but leverage the Navy's investment in NPS; the result is that the Navy gets a much broader, mission driven educational institution to support its mission while that institution protects itself from the vagaries of defense funding by diversifying revenue sources [CFR 3.1, 3.8].

This strategy is not free of peril as diversification may also seem to threaten commitment to the Navy as the core mission of NPS. The success of this strategy is the result of not only solid strategic planning but of skillful alignment of programs and services with the needs of the Navy in order to demonstrate loyalty to NPS's key sponsor. NPS has increased contact with program sponsors and aligned institutional strategic thinking, assessment and school level planning with

sponsor interests. Among their interests has been a commitment to engage U.S. and international partners, both civilian and military in Global Security issues. This change comes as a result of the recognition that NPS is a valuable asset whose long-term availability and relevance is enhanced by strategies to leverage Navy funding and broaden the base of support for the institution. [CFR 3.5]

To strengthen governance and decision making, NPS has reorganized its administrative structure to reduce direct reports to the president, create clear lines of accountability and strengthen administrative capacity [CFR 3.8]. For example, the new (July 2010) VP for Administration and Finance has already had an impact on the integration of financial resources and facilities, and she has begun to establish metrics to assess the performance of units under her direction [CFR 3.6, 3.7]. A new priority-driven space allocation process has rationalized space assignment and reduced time spent on unproductive activities related to competition for limited space. Space planning is now integrated as part of strategic planning and the new facilities management structure (with a local Base Commander representing the interests of NPS in DC-based Navy-wide construction planning) has resulted in enhanced allocations for maintenance and a stronger position regarding major construction projects for the future. It is evident to the team that the strategic plan is creating focus that is minimizing role conflict and bringing a newly configured leadership team together to address institutional priorities.

There is direct evidence that the character of decision-making conversations has changed even since the CPR visit. Schools now produce school-based plans that drive faculty hiring and program approval decisions. The deans are unanimous in expressing trust in the fairness of position and budget allocations driven by the new planning processes. As a result of both transparent processes and the achievement of results that matter to the faculty, faculty support for

strategic planning, assessment, and action planning has increased. The visiting team noted that conversations in response to team queries were strategically focused, reflective and collaborative reflecting early steps in creating a culture in which results enhance credibility, building the trust needed for more effective decision making. There is ample evidence that NPS is building a culture capable of acting together when the institution faces opportunities and challenges. [CFR 3.8-3.11]

Among the most significant changes in the culture is the institution of a new budgeting process in which each unit presents requests tied to its strategic plan which, in turn, is aligned with the NPS strategic plan. Keeping in mind that NPS is a military organization, the university recently held its first ever open presentation of the proposed budget. Faculty representatives expressed surprise at the detailed information that was available, and senior administrators expressed surprise at the collegial nature of the conversation. This process was made possible by the new financial information system (KUALI) which after running in parallel with the legacy system for a year “went live” on October 1, 2010 without serious issues. In the first pass with the new budgeting process not all revenue streams were included in the process leaving some (e.g., reimbursable student revenues) in the legacy process until the next round. This transition is a major change both in culture and capacity in comparison with former processes in which six administrators came to the table to plan because they each had information about revenues and expenses that nobody else had.

Among the best indicators of evidence-based practices is the creation, implementation, and action planning related to a new Customer Satisfaction Survey managed by the division of Administration and Finance. Administrative managers, faculty and staff reviewed the results of the survey and identified areas where service improvements were needed [CFR 4.4, 4.5]. The

most important of these is contracting. These results are already shaping strategies to reduce bureaucratic barriers to contracting effectiveness. NPS intends to assume authority to perform contracting functions on its own. These data, the inclusive analysis and data-driven plans for change have been powerful tools in improving the strategic environment within which NPS operated, thus removing barriers to mission effectiveness and decreasing operating costs.

Evidence that distributed high performance computing solutions were increasing costs, complicating maintenance and harming performance of systems led the ITACS staff and faculty associates to conclude that a centralized solution was needed. That the new system is meeting needs and increasing service capacity is clear. Users are abandoning their own local solutions in favor of the central system. The strength of this success, however, poses challenges in that the funding model was not built for this level of utilization. A sustainable investment will need to be made to protect this capacity.

Another outcome of administrative reorganization has been the enhancement of the University Advancement function with new tasking and a new leadership structure [CFR4.2, 4.3]. A recently completed evaluation and plan completed by Rensselaer Polytechnic Institute's Vice President for Strategic Communications and External Relations will guide the development of this function, but the results are already impressive.

### **SECTION III. COMMENDATIONS AND RECOMMENDATIONS**

NPS has made impressive progress in a short period of time on the major issues identified in previous visits and in developing a culture of assessment and educational effectiveness. There is still work to be done, but the progress since the proposal was submitted in December 2006 is a

measure of the commitment of the institution and the willingness of its faculty and staff to do the important work involved with WASC accreditation.

**Commendations:**

1. NPS has a robust and effective culture of reflection, strategic planning, and effective action. The achievements to date from the 2008 Strategic Plan have advanced NPS's reputation as a significant contributor both to academia and to National Security.
2. NPS continues to immerse its students in learning experiences that develop their skills and expand their own strategic and critical thinking capacities, thereby providing to the Navy and other sponsors graduates of the highest caliber.
3. In an era of declining resources, NPS administration, faculty, and staff have managed their resources astutely and generated increased funding for research and equipment acquisition that support the academic mission and enhance the reputation of NPS as a valuable resource for national policy and strategic deliberations.
4. The appointment of a permanent president and restructuring of the administrative organization have generated increased trust and confidence of faculty, students, and sponsors. This disciplined and mission-focused organization gives evidence of its own commitment to consistently high performance and responsiveness of the needs of its own internal and external constituencies.
5. The Educational Effectiveness Steering Group shows leadership, and appears to be in a good position to continue the good work inspired by the enthusiasm and momentum surrounding the WASC review. The group appears ready and willing to funnel appropriate resources to programs showing need as a result of assessment projects.

6. The curriculum and program review processes are planned, scheduled, and executed in a systematic and rigorous fashion, creating a culture of continuous improvement in the programs. Faculty are open to suggestions from the sponsors as a result of these reviews, thus strengthening both the curricula and the student experience.
7. The work inspired by the PETAL program and engaged faculty has caused a bubbling up of conversations about teaching and student learning. This program is bringing fundamental change to the institution with regard to attention to student learning and the scholarship of teaching.
8. The Distance Learning programs are carefully planned and respond to strategic priorities of the institution. In addition, the programs respond to a growing need to expand the availability of NPS' unique programmatic offerings, which have received positive evaluation from the students engaged in the programs.
9. Strong strategic leadership has built approaches and supporting systems that have won praise from the Inspector General of the Navy. The implementation of these approaches/systems has built institutional capacity for strategic thinking and reshaped decision processes. The success of these changes is evident in the depth of the use of strategic planning approaches and the willingness of faculty and staff to take on the burden of planning. This is only true because planning had led to results that are valued by faculty and staff. The resulting credibility has fueled rising trust that is leading to a stronger problem solving culture, an essential feature for a "demand driven" organization which creates and manages programs in response to external sponsors.
10. New systems and tools are being funded because the case for these investments is solidly grounded in local needs and analysis and clearly related to the institution's ability to

deliver to the requirements of sponsors. The strategic position of NPS is guaranteed by its ability to track changing requirements and respond successfully with research and educational programs that directly serve the needs of sponsors. In order to protect this capability NPS has taken steps within its control to increase its flexibility to adapt to rapidly changing needs.

11. The success of the KUALI implementation is evident in the degree to which faculty and staff are abandoning “shadow systems” in favor of a centralized system which makes all of their budget allocations transparent. The degree of success in building sustainable systems to allocate resources strategically is truly remarkable.

12. NPS is developing the culture of a learning organization that not only acts effectively but thinks about how it has acted and why it has gotten the results it has. NPS is doing its thinking in a data rich environment in which best practices drive discovery and problem solving efforts. Thus, the university is able to improve results without greater cost and when investment is necessary clearly argue the ROI for essential investments with the nature of the returns linked to the needs of the funding sponsors.

### **Recommendations:**

1. NPS should continue to support the work of the EESG, which serves a vital function in facilitating the momentum of strategic planning. By institutionalizing this effort, NPS will sustain its disciplined focus on continuous improvement.[CFR 4.1- 4.4]
2. The diversity of the student body, complimented by efforts to diversify funding sources for NPS programs, is encouraged. The richness of diverse perspectives among the

student body and through emerging international partnerships strengthens the capacity to address global issues both in the classroom and in real-world scenarios. [CFR 1.5]

3. As NPS takes its rightful place on the world stage of research universities, it will need to make its strongest case for relief from those constraints, externally imposed, that limit its ability to compete successfully for its first choice among scholars, to engage in cooperative agreements and contracts more normative for research universities, and to develop additional revenue streams. [CFR 3.6, 4.1, 4.2]
4. NPS has made great progress in developing a sustainable and rigorous distributed learning program. The institution should continue the development of the infrastructure to support DL through the establishment of the DL council. [CFR 3.7]
5. The NPS programs that currently receive specialized accreditation have model assessment practices. The institution should continue to expand on these best practices with regard to direct measures of student learning to inform both academic and curricular reviews, by providing guidance and resources to the rest of the institution to follow their leads. [CFR 2.3, 2.5, 2.6, 2.7]
6. NPS should continue to support the PETAL program, and find ways to reward faculty for their attention to the improvement of student learning. [CFR 3.4]
7. NPS' parent organization, the U.S. Navy, can strengthen its ability to address the needs of the Navy by working with NPS to increase flexibility that will lead to cost savings and the redeployment of assets for great impact. [CFR 3.8]
8. Advancement and communications leaders need to be empowered to exercise more leadership in messaging for the whole institution. While the entrepreneurial traditions of NPS are a strength of the institution, they can also weaken commitment to a unified



institutional identity. Advancements efforts have already extended the reputation of the institution. Stronger recognition is having an impact on support for NPS within and outside of the Navy. A next step will be to build synergy with the NPS Foundation. This relationship fits the characteristics of “loosely coupled” organizations at this point, and it would appear that neither party has the experience to create a plan for closer cooperation. It is recommended that an outside consultant or peer institutions be engaged to assist in developing this relationship in order to increase external support for NPS. [CFR 4.1, 4.2, 4.8]

9. While the new approach to space allocation assures the best use of existing spaces, it is clear that the implementation of the strategic plan for NPS will require new construction. NPS has planned for an optimal size in order to adapt to the Navy’s changing workforce and research needs. Facilities to match the planned optimal size are essential. To manage to the low end of expected needs and suffer excess demands during periods of high need will weaken the institution and lead to sub-optimal performance. Allowing the institution to vary enrollment composition and build to an optimal maximum capacity that can meet the Navy’s peak needs is a more viable strategy. [CFR 3.5, 3.6, 3.8]